11 December 1969

STAT [redacted]

Dear Jim,

The requirement to explore the feasibility of using your software on the UNIVAC 494 has been levied on the internal computer people. Consequently, in order to determine the nature and scope of the problem, they have given me the enclosed list of questions. I have answered some of them for the most part; however, they would also like to have your response. I suggest the answers you supply be as brief as possible, since I'm sure there will be more.

As for the program listing, I would like to have a recent listing for my own files. I have been required more and more to talk to others doing similar work and want to be in a position to state whether or not these are in any way a duplicate of your work. A single program listing would be sufficient as it can be xeroxed here. Internally, this information will be treated as proprietary.

If there are any questions, please call me.

Very truly yours,

[redacted] STAT

Encl.

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In order to determine the feasibility of converting the image manipulation programs for use on the UNIVAC 494 computer, answers to the following questions would be appreciated.

1. What level of Fortran is now used for these programs and what will be the level on the IBM 360? (IV) 1800 subset of IBM Fortran IV

2. Is the system segmented? (phases) How many programs are involved? How many separate subroutines? 80 yes - based on root overlay routine assigned overlay level

3. What are the core requirements of each program or subroutine? If it is not practical to provide this information, what is the maximum core needed at any one time? 120,000 bytes - will be further segmented 8 bit byte, 4 byte word

4. What input array sizes are presently used and what is the future goal? 64x64 array 64x128 w/ 360-44

5. Is it practical to logically break up the larger programs so as to fit in 32K computer words of core? In order to keep core requirements below 32K, is it practical to break up input arrays so as to operate on them in parts? will bit Haar is the largest

6. For a typical image manipulation problem, how many times would a program or series of subroutines have to be run? How much total central processor time would be needed for such a problem (estimate)?

7. How well is each program and subroutine documented? a) Nothing, b) Rough notes and block diagrams, c) Rough specifications including math models, or d) Complete specifications in final form including block diagrams and math models, e) other (please specify). overlay structure tree

8. What peripheral equipment is needed in addition to the central processor--how much drum, disc, or tape storage, etc?

9. Please supply program listings for the system, if possible.

Communication with external data switch not done
graphing & picture making (either assembly language)

4096	— Real part
8192	— Imag part

Stored in 1,2,3, manner

Common size 9 to 10 K words.

Disc I/O could be problem area

maybe reprogram

Job Control language (for storing on disc area etc.)